

AIR FORCE INTELLIGENCE, U. S. A.

Macmillan, 1962, pp. 112-13. This is the first
reference to the "secret" meeting between
Menzel and Khrushchev. Menzel's account
of the meeting is as follows:

"I was asked to go to Moscow in April 1957
to discuss our joint interest in the development
of a nuclear weapon. I met Khrushchev in
the Kremlin and we had a secret meeting.
He told me that he wanted to develop a nuclear
weapon and that he wanted to do it quickly.
He also told me that he wanted to keep the
development of the nuclear weapon secret.
I told him that I would help him with the
development of the nuclear weapon and that
I would keep the development of the nuclear
weapon secret." (pp. 112-13)

VASIL'YEV, I.V.; MIROSHNICHENKO, G.A.

Return of the ether-aldehyde fraction to the beer still. Spirit.
prom. 28 no.6:16-20 '62. (MIRA 16:10)

1. Lokhvitskiy spirtokombinat.

1. MTROSHNIKENKO, G.
2. USSR (600)
4. Cotton Gins and Ginning
7. Ways for decreasing air consumption in removing fiber and lint, Khlepkovozastvo, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

Name: MIROSHNICHENKO, G. I.

Dissertation: Some physical and mechanical properties of raw cotton

Degree: Cand Tech Sci

Defended at
Degree: Min Higher Education USSR, Tashkent Textile Inst

Publication
Defense Date, Place: 1956, Tashkent

Source: Knizhnaya Letopis', No 48, 1956

MIROSHNICHENKO, G.I.

Some physicomechanical properties of raw cotton. Tekst.prom.
16 no.9:10-14 S '56. (MLRA 9:12)

1. Glavnnyy inzhener GPI-4.
(Cotton--Testing)

MIROSHNICHENKO, G.I.; ROGANOV, B.I., kand.tekhn.nauk, dots.

New type of cotton ginning plant for Golodnaya Steppe. Tekst.prom.
17 no.10:12-15 0 '57. (MIRA 10:12)

1.Glavnyy inzhener Gosudarstvennogo proyektnogo instituta - 4.
(Golodnaya Steppe--Cotton gins and ginning)

MIROSHNICHENKO, G. K.

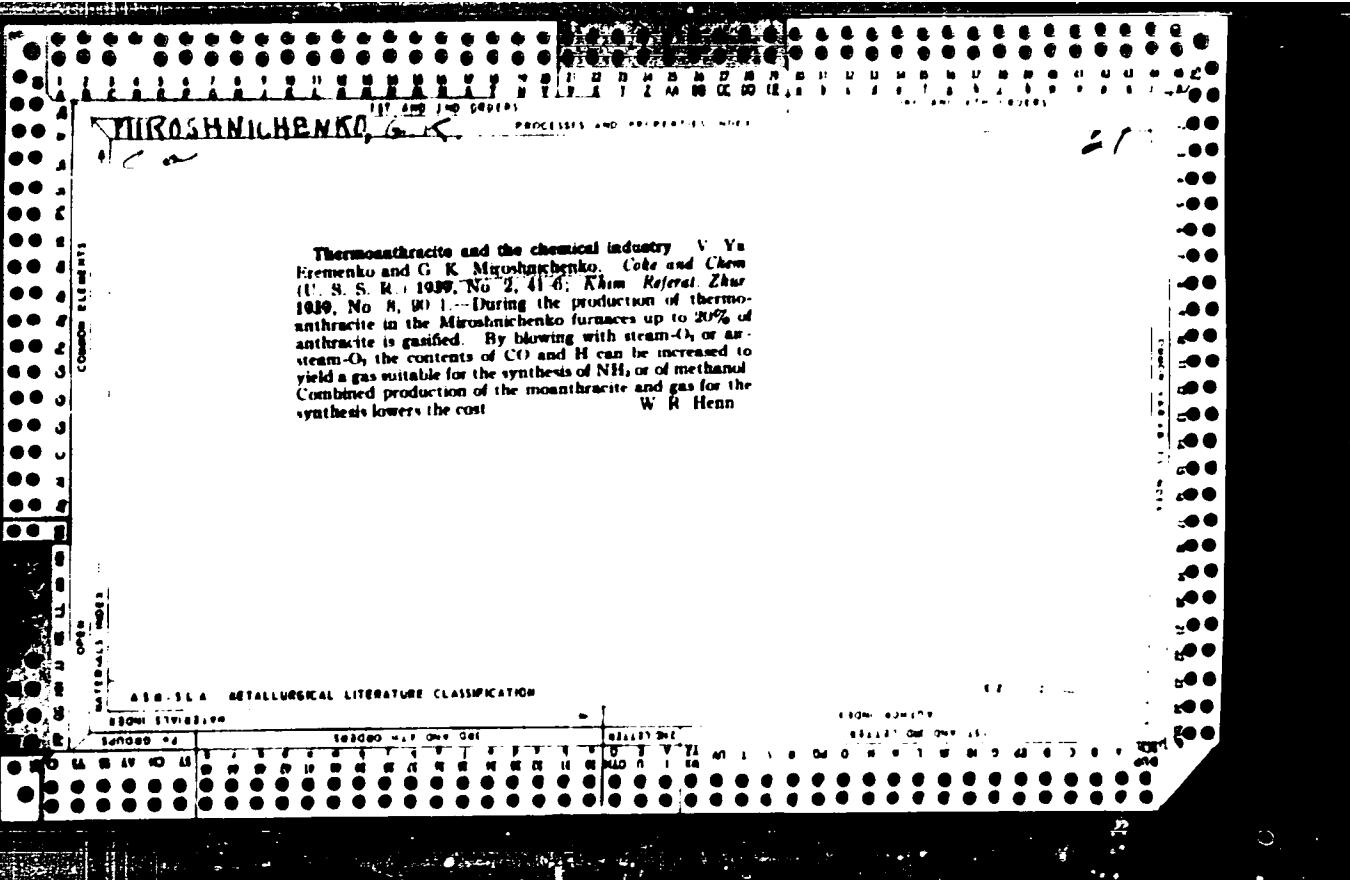
21

Thermonanthracite as a new type of metallurgical fuel
G. K. Miroshnichenko. Vestn. Standardizatsii 13, No.
11, 5-14, No. 12, 7 TITTRISI. Chem. Zvest. 1959, 1, 342-3

Thermal treatment of anthracite produced an increase in
the sp. gr. (by about 14%), and in the C content (1.28%)
and a reduction in the content in N + O, in the content
in volatile constituents and especially in the H and S
contents (the latter by about 40%). The ash content was
in direct ratio to that of the raw material - no change in
the distribution of the ash throughout the structure was
found. The Si content of the product was slight, the re-
sistance to compression was very high (about 600 kg./sq.
cm as compared to 220 kg./sq. cm for anthracite). Like
coke but in contrast to anthracite, the product showed no
reduction in the resistance to compression under thermal
stress. Thermonanthracite is very dense and underwent
no further increase in d. or change in form when again
heated to 1300-1400°. Its flame point is 633-647°. It
stands between coke and anthracite as regards combusti-
bility.

W. A. Moore

ABSTRACT METALLURGICAL LITERATURE CLASSIFICATION



MIROSHNICHENKO, G.K.
CA

9

The strength of molds of cupola cast iron smelted with thermosanthracite (G. K. Miroshnichenko and B. B. Shvedenko, *Literatur. Dokl.* 12, No. 4, 256 (1941); *Chem. Zvest.* 1943, I, 41, et al.) [1, 37, 5031]. The cast iron chill molds produced with the use of thermosanthracite contained C 3.3-3.7, Si 1.25-1.45, Mn 0.6-0.8, S 0.06-0.11 and P 0.08-0.1%. A relationship was found to exist between the casting temp. of the molds and their strength, the latter increasing with increasing casting temp. Comparison of the fine structure of cast iron smelted with thermosanthracite with that of cast iron produced using coke as fuel showed that with increase in the superheating temp. of the cast iron the graphite becomes finer, its laminae become thinner and more uniformly distributed in the groundmass. M. G. Moore

APP-11A METALLURGICAL LITERATURE CLASSIFICATION

MIROSHNICHENKO, G.Y., dots.; VASIL'YEV, A.G., kand.tekhn.nauk;
SHCHERBAKOV, V.I., inzh.; LUR'YE, D.A., inzh.

Automatizing the process of cupola charging and level control
by means of radioactive isotopes. Lit.proizv. no.8:14-15 Ag '57.
(MIRA 10:10)

(Cupola furnaces)
(Gamma rays--Industrial applications)

MIROSHNI, CHE NKO

AKSMAN, N.M.; VILENSKIY, L.I.; GORBUNOV, N.G.; GUBSKIY, V.N.; GURVICH,
M.D.; LATYSHEV, Yu.M.; LEVONTIN, L.I.; LIVSHITS, T.G.; LOGI-
NOVA, M.K.; LUR'YE, D.A.; LYANDRES, G.D.; MIROSHNICHENKO, G.K.;
MOGILEVSKIY, B.Ya.; NEMKOVSKIY, M.I.; ORLEANSKIY, Ya.P.; SA-
VITSKIY, A.H.; SIMMA, S.F.; SURKOV, G.Z.; SHMYGUL', B.P.; SHUBIN,
V.P.; DONSKOY, Ye.Ye., red.izd-va; KAL'NITSKIY, R.Ya., red.izd-va;
ZAMAKHOVSKIY, L.S., tekhn.red.

[Mechanization and automation in the machinery industry] Mekhani-
zatsiya i avtomatizatsiya v stankostroenii. Khar'kov, Khar'kovskoe
obl.izd-vo, 1958. 119 p. (MIRA 13:2)

1. Kharkov. Institut "Giprostanok." 2. Direktor instituta "Gipro-
stanok" (for Orleanskiy).
(Machinery industry--Technological innovations)
(Automation)

S/123/60/000/322/003/013
A001/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 22, p. 190,
122140

AUTHOR: Miroshnichenko, O.K.

TITLE: The Application Methods of Radioactive Isotopes in Foundry Work

PERIODICAL: V sb.: Peredovoye v tekhnol. liteyn. proiz-va, Khar'kov, 1958,
pp. 158-173

TEXT: The units are described which are based upon the utilization of γ emitters and γ -relay for the automation of the process of cupola charging and the control of the charge level by means of radioactive isotopes, the control of the molds filled up on the conveyer, the automatic control of the charging of the hoppers with the mold compound, the control of the cast iron level in the cupola settling reservoir, the continuous control and automatical regulation of the concentration of the liquid clay, the control of the wear of the fettling in the smelting zone of the cupola, and the automatical regulation of the supply of blast air and water supply for cooling the housing. There are 9 figures. Zh.S.S.
Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

NAME: BOOK EXPLANATION

Author: L. Sh., S.S. Kulinin, D.A. Nar'ya, I.I. Lopatin, G.F. Miroshnikova,
B.P. Shengoril, and V.M. Sherstobitov

Armenian National Academy of Sciences CO₂ Production
(Aromatic Plant for the Production of CO₂) Collection of Scientific Papers
Moscow, Nauka, 1960. 65 sheets, 3,000 words printed.
Secretary Adm. Gorobtsev, Corresponding Member, Academy of Sciences USSR; Director
of Technical Services, Professor Chief Engr. P.L. Sosulin, (Southern Division, Minsk);
P.L. Seregin, Engineer; Ed. (inside book); M.L. Sosulin, M. (title page);
Iu. P. Orlovskaia.

PURPOSE: This book is intended for technical personnel in foundry shops.

CONTENTS: The book contains 65 drawings of aromatic installations for the production of carbon dioxide. A brief description is also given of basic methods of CO₂ production for general industrial uses and for the food industry. The installation was exhibited at the All-Union Industrial Exposition in 1958. No personalities are mentioned. There are no references.

NAME OF AUTHOR: None given. The book is listed as follows:

1. Modern Methods of CO₂ Production
2. Principles of Operation of the Aromatic Installation
3. The Production of CO₂
4. Calculations for the Installation
5. Automatic Control Scheme
6. Basic Assemblies of the Aromatic Installation
7. M. L. Sosulin
8. S. S. Kulinin
9. Basic proportions diagram
10. Catalog

6. K 1/27/27 H 314 1016

VORONOV, N.A., doktor tekhn.nauk; TESLYUK, A.K.; MIROSHNICHENKO, G.L.;
KUZNETSOVA, V.P.

Composite teeth for the EKG-4 excavator bucket. Mat. 1 gornorud.
(MIRA 17:9)
prom. no. 2:53-54 Mr-Ap '64.

MIROSHNICHENKO, G.N. (Moscow)

Theory and methods of studying intraspecific competition in
plants. Bot. zhur. 40 no. 3:408-410 My-Je '55. (MLRA 8:10)
(Botany--Ecology)

MIROSHNICHENKO, G.N.

Stubble and companion crops in the southern Ukraine. Zemledelie
8 no.6:34-36 Je'60.
(MIRA 13:10)

1. Glavnyy agronom Vasil'yevskoy rayonnoy inspeksii po sel'skomu
khozyaystvu, Zaporozhskoy oblasti.
(Ukraine--Field crops)

MIROSHNICHENKO, G.N.

Collecting springtails (Collembola). Zool. zhur. 39 no.1:143
(MIRA 13:5)
Ja '60.
(Collembola) (Insects--Collection and preservation)

NEYMAN, N.F.; MIROSHNICHENKO, G.N.

From the pages of foreign biological and agricultural publications.
Agrobiologiya no.4:636-638 J1-Ag '62. (MIRA 15:9)
(GENETICS) (AGRICULTURE)

MIROSHNICHENKO, G.N.

From the pages of foreign biological and agricultural publications. Agrobiologija no.6:951 N-D '62. (MIRA 16:1)
(Bibliography—Agriculture)

16.9500

307, 16.9500

AUTHOR: Miroshnichenko, G. P. (Moscow)

TITLE: On Self-Vibrations of a Platform for a Dynamic Stand

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 11, No. 4,
pp 293-300 (USSR)

ABSTRACT: In the study the motion of a platform for a sine-shaft dynamic stand is investigated; the platform is driven by an induction motor with a hollow rotor. On this platform are placed the sensitive elements of an autopilot. The conditions for appearance of self-vibrations in presence of sticky friction are established. The stand blockage is shown in Fig. 1. On the shaft of an induction motor IM next to the platform P, potentiometer cylinder ψ and tachometric generator TG are mounted. The transfer function of induction motor considered as a linear element is given in the form

Card 1/7

$$\frac{K_m}{p(T + pT_n)}$$

On Self-Vibrations of a Platform for a
Dynamic Stand

SOV 10-30-1970
Soviet

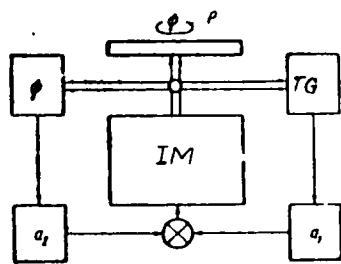


Fig. 1.

and a_2 values. The phase representation can also be used in a system of coordinates (ψ, ω) , where $\omega = \dot{\psi}$. Equation of the state of dynamic equilibrium is given in the form

$$I\dot{\omega} = M_{Bp} + M_{Tp} \quad (1)$$

Card 2/7

where M_{Bp} and M_{Tp} are driving and resistive moments,

On Self-Vibrations of a Parallel-Linkage
Dynamic Stand

Prepared by Dr. J. E. L. G. van der Pol, Delft University of Technology

$$M_{\text{up}} = [a_1 + \varphi(\omega)] m - a_2 \dot{\varphi} \quad (3)$$

where $a_1 > 0$; $a_2 > 0$; $\varphi(\omega)$ is a continuous function of ω ; m is the mass of the continuous function having the form $\varphi(\omega) = \int_0^\omega \Phi(\tau) d\tau$, $\Phi(\omega)$ a finite function of (ω, ω') , ω' being the frequency of the system M_{up} .

In Eq. (3) we have $\dot{\varphi} = \Phi(\omega) - \varphi(0)$; $A_1 = a_1 + \varphi(0)$.

Since $\Phi(\omega, \omega')$ is a finite function of (ω, ω') :

$$M_{\text{up}} = [A_1 + \Phi(\omega)] m - a_2 \dot{\varphi} \quad (4)$$

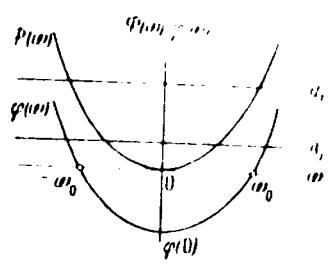
Introducing Eq. (4) in Eq. (2) we find the differential equation of motion of the system:

$$I_{\text{up}} = [A_1 + \Phi(\omega)] m - a_2 \dot{\varphi} - M_{\text{up}}(\omega) \quad (5)$$

Carrying

On. S. (f+V) < 0 for $\omega < \omega_0$. P. $\omega < \omega_0$

$P(\omega) = \frac{1}{2} \omega^2 + V(\omega)$



$\Rightarrow : (\exists) \omega_{\text{min}}(\omega) \equiv \omega < (\exists) \omega_{\text{max}}(\omega) \geqslant \omega_0$
 $(\exists) \omega_{\text{min}}(\omega) \leq \omega < (\exists) \omega_{\text{max}}(\omega) \geq \omega_0$
because $\omega_{\text{min}}(\omega) \leq \omega \leq \omega_{\text{max}}(\omega) \leq \omega_0$
so $\omega_{\text{min}}(\omega) \leq \omega_0$, $\omega_0 < \omega_{\text{max}}(\omega)$.

Case 4:

$\omega_{\text{min}}(\omega) > \omega_0$

$\Rightarrow : (\exists) \omega_{\text{min}}(\omega) \equiv \omega < (\exists) \omega_{\text{max}}(\omega) \geq \omega_0$
 $(\exists) \omega_{\text{min}}(\omega) \leq \omega < (\exists) \omega_{\text{max}}(\omega) \geq \omega_0$
because $\omega_{\text{min}}(\omega) \leq \omega \leq \omega_{\text{max}}(\omega) \geq \omega_0$
so $\omega_{\text{min}}(\omega) > \omega_0$, $\omega_0 < \omega_{\text{max}}(\omega)$.

On Self-Validation of
Dynamic Stand

GOV. APPROVAL

function:

$$F(\omega) = \frac{1}{\mu} [A_1 + \Phi(\omega)] \omega,$$

where μ is a constant, the product of unit step function of form

and $\mu = 1 - \Gamma_1(\omega)$, $\Gamma_1(\omega)$ is the probability of failure of system;

$$\omega + \mu F(\omega) = \mu \omega + \frac{1}{\mu} M_{\omega}(0) \quad (8)$$

After some differentiations we get the result:

$$f(\omega) = F'_{\omega\omega}$$

Integrating the above equation we get:

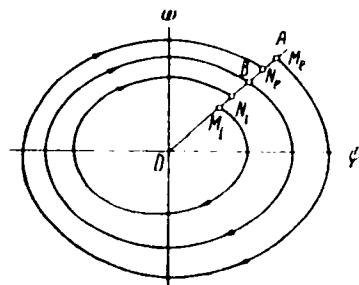
$$f(\omega) = \frac{1}{\mu} [a_1 + \varphi(\omega)] \quad (10)$$

Given

On Self-Vibrations of a Free Circular Dynamical Stand

By G. V. K. Ramanujan

The problem of self-vibration of a free circular dynamical stand has been solved by Prof. H. F. Dym in his paper "Free Vibrations of a Circular Dynamical Stand" published in Proc. Roy. Irish Acad. Sect. A, Vol. 63, No. 1, 1963, pp. 1-10. The solution is given below.



$$\ddot{\phi} + M(\omega) - \mu\dot{\phi} = 0 \quad (12)$$

Let $\theta = \phi - \omega t$. Then $\dot{\phi} = \dot{\theta} + \omega$ and $\ddot{\phi} = \ddot{\theta}$. Substituting in (12), we get $\ddot{\theta} + M(\omega) - \mu\dot{\theta} = 0$. This is a standard differential equation of the form $\ddot{\theta} + P\dot{\theta} + Q\theta = 0$, where $P = -\mu$ and $Q = -M(\omega)$.

$$\ddot{\theta} + P\dot{\theta} + Q\theta = 0 \quad (13)$$

It is known that the general solution of (13) is given by $\theta(t) = C_1 e^{-\frac{1}{2}\mu t} + C_2 t e^{-\frac{1}{2}\mu t} + I_m(\omega t)$. The first term $C_1 e^{-\frac{1}{2}\mu t}$ represents the transient part of the solution and the second term $C_2 t e^{-\frac{1}{2}\mu t}$ represents the damped oscillatory part of the solution. The third term $I_m(\omega t)$ represents the periodic part of the solution. The constants C_1 , C_2 , μ and ω are determined by the initial conditions.

Credited by

On 5-17-1945, I had the opportunity to meet with Dr. J. S. Gandy.

CC: [unclear]

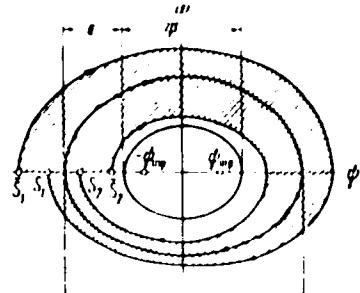


Fig. 1.

Dr. Gandy, a member of the Research Board, U.S. National Bureau of Standards, Washington, D.C., has been invited to speak at the meeting of the Optical Panel, October 26, 1945 (1).

DEPARTMENT: Defense

C-1

MIROSHNICHENKO, G.P.; FONICHKIN, N.P.

Differentiating amplifier with characteristics of a band filter.
Priborostroenie no.7:7-9 Jl '62. (MIRA 15:7)
(Amplifiers (Electronics))

YEVREINOVA, T.N.; MIROSHNICHENKO, G.P.

Free nucleotides of the thermophile and mesophile variants of
Aspergillus fumigatus. Mikrobiologija 31 no.3:428-433 My-Je
'62. (MIRA 15:12)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo
universiteta imeni Lomonosova.
(NUCLEOTIDES) (ASPERGILLUS)
(PLANTS, EFFECT OF TEMPERATURE ON)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

SHISHMAREVA, L.B.; GISIN, P.G.; MIROSHNICHENKO, G.Ya.; Prinimali
uchastiye: SHEPPER, L.Ya.; KLEYEV, V.I.; KAKHOVSKAYA, N.I.

Optimum parameters of the process of painting the products
by flow coating. Lakokras. mat. i ikh. prim. no.4:30-34 '61.
(MIRA 16:7)

(Painting, Industrial)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I., inzh.

How to reequip commercial dairy farms for loose housing of cattle.
Sel'stroi. 18 no.11;22-24 N '63. (MIRA 17:3)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I., kand. tekhn. nauk

A fast dry-cargo ship of a new type. Mor. slot 25 no. 5:37-39 My '65.
'MIRKA 13:5.

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I.A., inzhener.

Bulldozer-ripper. Rats. i izebr. predl. v strel. no.112:17-19
'55. (Bulldozers) (MLRA 9:6)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

KONSTANTINOV, Vadim Pavlovich; NITS, Yu.K., retsenzent;
MIROSHNICHENKO, I.F., red.; KAN, P.M., red. izd-va;
RENNIEVA, T.T., tekhn. red.

[Ship radio operator's handbook] Posobie sudovomu radistu.
2., dop. i perer. izd. Moskva, Izd-vo "technoi transport,"
1962. 262 p. (MLA 15:12)
(Radio in navigation—Handbooks, manuals, etc.)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

KONSTANTINOV, V., inzh.; TSYPIN, Ya., inzh.; MIROSHNICHENKO, I., inzh.
Introducing automatic control in inland navigation and prospects
for its development. Rech. transp. 20 no. 2:12-14 F '61.
(Inland navigation) (Automatic control) (MIRA 14:12)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I., inzh.

New marine radio-telephone "Irtysh." Rech. transp. 21
no.12:40-42 D '62.
(Telephone, Wireless) (Radio ~~in~~ navigation) (MIRA 15:12)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIRONENICHENKO, I.I.; PAVLOVA, A.N.; LEONT'YEVA, A.N., kandidat sel'skokho-
zyaistvennykh nauk, redaktor.

[Chick-pea] Nut. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1953. 111 p.
(MLRA 7:1)
(Gram (Grain))

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

USSR / Cultivated Plants. General Problems.

M-1

Abs Jour : Nef Zhur - Biologiya, No 13, 1958, No. 58482

Author : Miroshnichenko, I. I.

Inst : Acad. Sci. USSR

Title : Testing of Collections of Agricultural Plants in the Northern Zone of the Turkmen SSR

Orig Pub : Tr. Aralo-Kaspinsk. kompleksnoy ekspeditsii, AN USSR, 1957, vyp 8, 120-144

Abstract : A study of varieties and hybrids of the following plants was carried out at the Tashauz experimental station of the AS Turkmen SSR in 1952-1953: cotton plants, crops of vegetables and melons, of potatoes, winter wheat, corn, Japanese millet, spiked millet, foxtail millet, sesame, gambo hemp and sunflower. These plants were grown on soils impregnated with salt. Salt resistant crops and varieties were developed. Data on

Card 1/2

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I.K.

Influence of local conditions on the distribution of central plots
on state farms in northern Kazakhstan. Trudy Inst. stroi. i strojnat.
AN Kazakh SSR 2:20-35 '59. (MIRA 12:10)
(Kazakhstan--State farms)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I.K.

Economic efficiency of consolidating farmsteads on state farms and increasing the number of stories of buildings.
Trudy Kazakh. fil. ASia no.2:13-23 '60. (MIRA 15:2)
(Kazakhstan--State farms)
(Kazakhstan--Farm buildings)

ACC NR: AT6037047

SOURCE CODE: UR/0000/66/000/000/0097/0109

AUTHOR: Miroshnichenko, I. M. (Engineer)

ORG: none

TITLE: Coherent radar efficiency in the processing of partially coherent signal
packets

SOURCE: Moscow. Aviationsionnyy institut. Teoriya i tekhnika radiolokatsii (Radar
theory and techniques); sbornik statey, no. 1, Moscow, Izd-vo Mashinostroyeniye,
1966, 97-109

TOPIC TAGS: radar, coherent radar, radar equipment, radar signal processing

ABSTRACT: Using threshold signal-to-noise ratio as an indicator of radar capability,
the author compares coherent and noncoherent processing of a partially coherent radar
signal and formulates requirements for stability of the phase-determining elements of
coherent radar components (the transmitter, local and coherent heterodyne, and delay
line). The analysis shows that the application of coherent processing for a parti-
ally coherent signal does not essentially reduce signal threshold energy. The graphs
and formulas provided facilitate choice of the channel numbers and passband comb
filter for various targets. Orig. art. has: 2 tables, 8 formulas, and 4 figures.

SUB CODE: 17/ SUBM DATE: 15Jul66/ ORIG REF: 005/ OTH REF: 003/ ATD PRESS: 5107
Card 1/1

UDC: 621.396.962.23(04)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

ONUCHAK, A. I., kandidat sel'skokhozyaystvennykh nauk; MIROSHNICHENKO, I. N.,
kandidat sel'skokhozyaystvennykh nauk

Furrow method of sowing sesame. Trudy VENII no.10:28-35 '54.
(Sesame) (MLRA 8:9)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

ПЕРСональные данные

LIPES, V.E., kandidat sel'skokhozyaystvennykh nauk; MIROSHNICHENKO, I.B.,
kandidat sel'skokhozyaystvennykh nauk

Effect of fertilizers on peanut and sesame yields in Kherson
Province. Trudy VENII no.10:36-39 '54. (MIRA 8:9)
(Kherson Province--Peanuts) (Kherson Province--Sesame) (Kherson
Province--Fertilizers and manures)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I. N., kandidat sel'skokhozyaystvennykh nauk

Vernalization of sesame seeds. Trudy VKhII no.10:40-42 '54.

(Sesame) (Vernalization)

(MIRA 8:9)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

1. "TVOJ SRRICHETNO, I."
2. USSR (600)
4. Shipbuilding
7. Installation of protective covering for gun bridges on a U.S. warship. May 13, No. 2, 1953.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

MIROSHNICHENKO, I.P.

✓ 2344. Miroshnichenko, I. P., Resistance and speed of ships with displacement bilge tanks (in Russian), *Vestn. Transport.*, no. 4, 1939, p. 17, 5-26, 1944 Rev. no. 1503; *Refl. Zb. Nach.*, 1954.

The results are presented of experiments made at the request of the Central Scientific Research Institute of the Merchant Navy in the testing tank of the IKI, on two groups of ship models of barge-like forms suggested by A.K. Demolovskiy (*Vodny Transport*, 1939 (11)) for mixed river and sea navigation. In addition to data on wave resistance, diagrams are given of the wave forms along the sides of the model hulls. Details but not always conclusive arguments are put forward on the basis of the experimental results from which the author concludes that bilge tanks, if correctly placed, can usefully improve the seagoing qualities of a ship's hull.

V. M. Lavren'ev, USSR
Courtesy of Referral/Serial Bureau
Translation, courtesy Ministry of Supply, England

124-57-2-1963

Translation from *Referativnyy zhurnal. Mekhanika*, 1957, Nr 2, p 69 (USSR)

AUTHOR Miroshnichenko, I. P.

TITLE On the Determination in a First Approximation of the Fundamental Design Elements of Passenger Vessels Intended for Both Maritime and Inland Navigation, With Due Consideration of Their General Architecture and Their Superstructure Development Coefficient
(*K voprosy opredeleniya v pervom priblizhenii osnovnykh elementov passazhirskikh sudov smeshannogo morskogo i tekhnicheskogo plavaniya s uchetom arkhitekturnogo tipa i koefitsiyenta razvitoshi verkhnikh stroyeniy*)

PERIODICAL *Tr. Tsentr. nauch.-tekhn. mor. flota* 1955, Vol. 1, Nr. 1,
pp. 119-130

ABSTRACT Bibliographic entry
<http://www.de.class>

Card 11

MIROSHNICHENKO, I., kandidat tekhnicheskikh nauk

Determining the full displacement coefficient for large tonnage
tank vessels. Mor.flot 15 no.10:24-27 0'55. (MLRA 8:12)
(Tank vessels) (Displacement (Ships))

KONTOROVICH, Ya., kandidat tekhnicheskikh nauk; MIROSHNICHENKO, I.

A low-tonnage vessel for the local transport of large cargoes of food and industrial merchandise. Mor.flot 16 no.5:19-22 My '56.
(MLRA 9:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut ekonomiki i eksplutatsii vodnogo transporta (for Kantorovich); 2. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota.
(Freighters)

KORCHAGIN, M.I., kandidat tekhnicheskikh nauk; LOGINOV, S.P., kandidat ekonomicheskikh nauk; MIROSHNIČENKO, I.P., kandidat tekhnicheskikh nauk; SMIRNOV, S.V., kandidat tekhnicheskikh nauk.

Problems in the modernization of the merchant marine. Sudostroenie 22
no.4:33-36 Ap '56. (MLRA 9:9)
(Merchant ships)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I.P.

Effect of certain elements of large tankers on their loading capacity. Trudy TSHIIMP no.9:75-85 '57. (MIRA 11:2)
(Tank vessels)

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I.P., kand.tekhn.nauk; SOKOLOV, L.G., inzh.

Construction of modern, large-tonnage loose-bulk cargo vessels in
foreign countries. Sudostroenie 23 no.12:56-60 D '57. (MIRA 11:2)
(Merchant ships) (Shipbuilding)

STRUMPE, Petr Ivanovich, kand.tekhn.nauk; YAKUSHENKOV, Andrey Andreyevich,
kand.tekhn.nauk; SYROMYATNIKOV, Viktor Fedorovich, kand.tekhn.nauk;
RAPOPORT, Leonid Il'ich, kand.tekhn.nauk; MILESHKIN, Georgiy
Aleksandrovich, kand.tekhn.nauk; MIROSHNICHENKO, Il'ya Patrovich,
kand.tekhn.nauk; ARAKELOV, Vladimir Mikhaylovich, inzh.; SKOMO-
ROVSKIY, Rostislav Vsevolodovich, kand.tekhn.nauk; PESOCHINSKIY,
Viktor Nikolayevich, kand.tekhn.nauk; NELDOVA, E.S., red.; TIKHO-
NOVA, Ye.A., tekhn.red.

[Over-all mechanization and automatization in the merchant marine]
Kompleksnaja mekhanizatsija i avtomatizatsija na morskem transporte.
Pod obshchei red. P.I.Strumpe. Moskva, Izd-vo "Morskoi transport,"
1959. 95 p. (MIRA 13:5)
(Merchant marine--Equipment and supplies)
(Cargo handling--Equipment and supplies)
(Automatic control)

AFANAS'YEV, Konstantin Arkad'yevich, inzh.; GРЕCHIN, Modest Alekseyevich,
inzh.; KORCHAGIN, Mikhail Ivanovich, kand.tekhn.nauk; LOGINOV,
Sergey Petrovich, kand.ekon.nauk; MIROSHNICHENKO, Il'ya Petrovich,
kand.tekhn.nauk; RАPOPORT, Leonid Il'ich, kand.tekhn.nauk;
SYROMYATNIKOV, Viktor Fedorovich, kand.tekhn.nauk. Prinimali
uchastiye: RAYEVSKAYA, Ye.A., inzh.; GRIGOR'YEV, Ya.I., inzh.
STRUMPE, P.I., red.; MARCHUKOVA, M.G., red.ind-va; LAURENOVA, N.B.,
tekhn.red.

[Modernization of sea-going cargo vessels] Modernizatsiya morskikh
transportnykh sudov. Pod obshchey red. P.I. Strumpe. Moskva, Izd-vo
"Morskoi transport," 1960. 306 p.

(Freighters--Equipment and supplies)

(MIRA 14:1)

MIROSHNICHENKO, I.P., kand.tekhn.nauk; SIDOROV, B.K., inzh.

Universal open-type freighter. Sudostroenie 26 no.9:5-11 S'60.

(Freighters)

(MIRA 13:10)

MIROSHNICHENKO, I.P., kand.tekhn.nauk; GOLUBEV, Yu.I.; ZHURAVLEVA, L.S.

Study of the architectural and structural form of the all-purpose
dry cargo ship for carrying wood, grain, and general cargoes. Trudy
TSNIIMF 7 no.36:3-28 '61. (MIRA 15:3)
(Freighters)

MIROSHNICHENKO, I.P., kand.tekhn.nauk; GABRILOV, M.N.; KUZ'MIN, I.I.

New type of medium-tonnage, combination dry cargo ship. Trudy
TSNIIMF 7 no.36:29-41 '61. (MIRA 15:3)
(Freighters)

MIROSHNICHENKO, I.P., kand.tekhn.nauk; GOLUBEV, Yu.I., inzh.
ZHURAVLEV, L.S. inzh.; TEL'YAK, I.A. inzh.

All purpose ship for transporting wood, grain, general cargo,
and industrial equipment. Sudostroenie 27 no.10.24-32 O '61.
(MIRA 14 12)
(Freighters)

MIROSHNICHENKO, Il'ya Petrovich, kand. tekhn. nauk; RYABCHIKOV, F.A.,
reteenent; OBERMEYSTER, A.M., red.; SERKO, G.S., red. izd-va;
LAVRENOVA, N.B., tekhn. red.

[Open-type, dry cargo, seagoing ships] Morskie sukhogruznive
suda otkrytogo tipa. Moskva, Izd-vo "Morskoi transport" 1962.
218 p.

(Freighters)

BUDBAN, V.A., Z.V., kand.tekn.nauk; ALEXANDER RENKOV, I.P., kand.tekn.nauk;
SHEBALOV, A.N., kand.tekn.nauk, vuz. SV, Yu.I.; TAL'VA, V.F.

Results of investigating the propulsive speed and seaworthiness
of ships with bulging outlines. Trudy .SMIIMF no.4 :27-37 163.
(MLA 16:9)

MILGOM 11 420, Lat., 42° 10' 00"; Long., 100° 10' 00"

Low aspect ratio hull structural type. Estimated
carries turbine-driven ship. Truly TSMIDMF 64:3-13 164
(MIRA 1971)

MOSCOW, RUSSIA, AND TECHNIK

Considerable increase in the propulsive speed of air cargo
strips. Truly TSKIMP 54:14-21 '64 (U) (P:1)

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

SECRET UNCLASSIFIED BY SPK; 5/22/01, 4:10, AND 5/22/01, 4:10

Improving the quality of life through
improvement of infrastructure. The "GATT" agreement
is a good example.

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

L 09050-67

ACC NR: AR6032251

(W) SOURCE CODE: UR/0398/66/000/006/A004/A004

AUTHOR: Strumpe, P. I.; Miroshnichenko, I. P.; Krayev, V. I.; Fel'dman, I. A.

TITLE: Future types of transport ships and the basic problems of improving their
technical operating characteristics 6

SOURCE: Ref. zh. Vodnyy transport, Abs. 6A18

REF SOURCE: Tr. Tsentr. n.-i. in-ta morsk. flota, vyp. 67, 1965, 3-11

TOPIC TAGS: ship, tanker, transport ship

ABSTRACT: Tables present the main measurements and characteristics of the basic types of transport vessels proposed by the TSNIIMF for use in the near future (1966—1970) in the Soviet maritime fleet. It is proposed that seven universal types of general cargo vessels be built with dwt of 1000—15,800 tons, two types of ore and coal carriers with dwt of 13,000 and 21,000 tons, and three types of tankers with a dwt of 4500 tons. The conditions are presented upon which the design of these ships is based, and the basic scientific problems of the development of the transport fleet, which must be solved in the near future are examined. [Translation of abstract]

SUB CODE: 13/
Cord 1/1 net

UDC: 629.123.2.004.6

L 10925-67

ALL NR: AR6034797 (v) SOURCE CODE: UR/0398/66/000/008/A011/A011

AUTHOR: Miroshnichenko, I. P.; Vorobtsov, Ye. S.; Sidorov, B. K.

8

TITLE: Architectural and construction improvements and cargo characteristics of the SEV-2 universal dry-cargo ships with a dead weight of 12500 tons to be built between 1966 and 1970

SOURCE: Ref. zh. Vodnyy transport, Abs. 8A64

REF SOURCE: Tr. Tsentr. n.-i. in-ta morsk. flota, vyp. 67, 1965, 120-128

TOPIC TAGS: cargo ship, shipbuilding engineering, marine engine, cargo handling/595 A II ship

ABSTRACT: The results are presented of investigations of ships with a dead weight of about 12,500 tons carried out at the Central Scientific Research Institute of the Maritime Fleet (TsNIIMF). An estimate is given for the adaptability of different classes of ships to high-speed cargo handling. The 595 A II with twin hatches is found to be the most efficient ship. The main dimensions and characteristics of this ship are as follows: The maximum length—152.8 m, the length between uprights—140.0 m, width—20.6 m, side height to top deck—12.3 m,

Card 1 / 2

UDC: 629.12.001.2.001.1

L 10925-67

ACC NR: AR6034797

draft at the plimsoll line—9.1 m, dead weight—12,800 tons, power of the main engine—9000 hp, and cruising speed—17.2 knots. [Translation of abstract]

SUB CODE: 13/

Card 2/2 *b7c*

GOLOVIZN', A.M., kand.tekhn.nauk; GOL'DENFON, A.K., kand.tekhn.nauk;
(REGOR'YEV, G.T.; KORNYAYEV, Y.U.T.; SRABOV, K.Ye.; STRUMPE, P.I.,
kand.tekhn.nauk, otv.red.; DRANITSYN, S.N., kand.tekhn.nauk, red.;
GOROBETS, V.A., kand.voyen.-morskikh nauk, red.; YEVREINOV, I.V.,
kand.tekhn.nauk; KORCHAGIN, M.I., kand.tekhn.nauk; KURZON, A.G.
doktor tekhn.nauk; MIROSHNICHENKO, I. ♀ kand.tekhn.nauk;
ROZHDESTVENSKIY, N.A., kand.tekhn.nauk; SYROMYATNIKOV, V.F.,
kand.tekhn.nauk; BAMA, N.G., red.; STUL'CHIKOVA, N., tekhn.red.

[Marine nuclear steam turbine plants.] Sudovye iadernye
proturbinnye ustavovki. Leningrad. Izd-vo "Morskoi transport,"
1963. 135 p. Leningrad, TSentral'nyi nauchno-issledovatel'skiy
institut morskogo flota. Informatsionnyi sbornik, no. 77/78.
Tekhnicheskaya eksploatatsiya morskogo flota, no. 15/16.
(MIRA 17:2)

1. Sotrudnik TSentral'nogo nauchno-issledovatel'skogo
instituta morskogo flota (for Goloviznin, Gol'denfon,
Grigor'yev, Kornayev, Srabov).

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

"APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

APPROVED FOR RELEASE: Wednesday, June 21, 2000

CIA-RDP86-00513R001134

MIROSHNICHENKO, I. S.

183T55

USSR/Engineering - Welding

Jan 51

"Fabrication of Welded Construction at Dnepropetrovsk Plan imeni Molotov," I. S. Miroshnichenko, Engr

"Avtogen Delo" No 1, pp 20-22

Fabrication of welded constructions amounted to 75% of total 1949 plant production. Plant recently began making all-welded blast furnaces and begins constr of 2d welded railroad span upon completing span of exptl welded bridge. Describes various plant operations such as prep for welding, automatic welding under flux, spot welding, manual welding and manuf of electrodes.

183T55

MIROSHNICHENKO, ENGR I.S.

USSR/Engineering - Welding, Columns

Jul 51

"Deformations of Columns of Tall Buildings in Welding," D. P. Lebed', Engr, Laureate Stalin Prize, I. S. Miroshnichenko, Engr

"Avtogen Delo" No 7, pp 22-24

Dnepropetrovsk Plant imeni Molotov conducted investigation of residual deformations caused by welding in H-section columns. Discusses warping of column flanges, longitudinal contraction, caused by welding of connecting members, dependence of this contraction on vol of welded metal and effect of welding of end plates on deviation of column butts from their original shape.

200T44

LIMBED', D.P., laureat Stalinskoy premii, inzhener; MIROSHNICHENKO, I.S.,
inzhener.

Producing all-welded spans for the E.O.Paton bridge in Kiev. Stroi.
prom. 31 no.12:10-15 D '53. (MLRA 7:1)
(Kiev--Bridges, Iron and steel) (Bridges, Iron and steel--
Kiev)

LEBED', D.P., inshener; MIROSHNICHENKO, I.S.

Electric flux welding of Martin furnace carcass stands. Svar. proizv.
no.6:11-13 Je '55. (MLRA 8:9)

1. Dnepropetrovskiy zavod metallokonstruktsiy imeni Molotova.
(Open hearth furnaces—Welding)

MIROS'NICHENKO, I.S.; SALLI, I.V.

Unit for the crystallization of alloys with a high rate of cooling.
Zav.lab. no.11:1398-1399 '59. (MIRA 13:4)

1. Dnepropetrovskiy gosudarstvennyy yniversitet.
(Metallic films)

86486

S/148, 60/000/008/006/018

A161/A029

18.1520

AUTHORS: Miroshnichenko, I.S., Salli, I.V.

TITLE: Metastable Equilibrium Lines in Diagrams of Binary Systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 8, pp. 104 - 109

TEXT: The alloys Pb-Sn, Bi-Sn, Al-Si, Al-Zn, Fe-C, Ni-C, Al-Mn, and Al-Cu were investigated in a wide range of concentrations including the eutectic, and data of other works were used for consideration of Al-Cu (Ref. 4) and Hg-Na (Ref. 5). Crystallization of eutectic alloys was studied at a high crystallization rate to determine if it is possible to obtain oversaturated solid solutions with a concentration exceeding the maximum at eutectic temperature. The principle described in Reference 3 was used - a drop of molten metal was ejected with high speed from the furnace and turned into a film either by splashing at impact on a copper sheet, or by quick catching between two copper plates. Films were obtained with a 0.03 - 0.2 mm thickness, and the calculated cooling speed was ~10⁵ degree/sec. The alloys could be divided into two groups, with no oversaturation (Pb-Sn, Al-Si, Bi-Sn, Al-Zn), and with considerable oversaturation (Al-Mn, Al-Cu)

Card 1/2

86486

S/148/60/000, 008/006, C18

A161/A029

Metastable Equilibrium Lines in Diagrams of Binary Systems

Al-Cu, Hg-Na, Ni-C). The first group does not form intermediate phases whilst the alloys of the second group do. The absence of oversaturation in the first group may be explained by the separation of the second phase that is too difficult to prevent. The following conclusions were drawn: 1) It is apparently not possible in practice to obtain oversaturation of a primary solid solution over the limit at eutectic temperature in eutectic alloys. 2) In alloys forming intermediate phases, considerable oversaturation may be obtained with sufficiently rapid cooling, but not above the maximum solubility of a solid solution in equilibrium with the given intermediate phase. 3) The experimental results confirm the continuation of solidus lines in stable equilibrium diagrams to the crossing with the eutectic horizontal of the metastable system. 4) Continuation of the solidus lines into the subcritical region was not confirmed in eutectic systems forming no metastable intermediate phases. There are 4 figures and 5 Soviet references.

ASSOCIATION: Dnepropetrovsky gosudarstvennyy universitet (Dnepropetrovsk State University)

SUBMITTED: July 16, 1959

Card 2/2

3141h

S/020/60/132/06/33/068
B004/B005

187520

AUTHORS:

Salli, I. V., Miroshnichenko, I. S.

TITLE:

Some Peculiarities of the Crystallization of Tin
at a High Cooling RatePERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6,
pp. 1364 - 1367

TEXT: The authors investigated the structure of alloys which were cooled rapidly by the method described in Ref. 9. The drop coming from the furnace solidifies between two copper plates to a film. Cooling rates of about 10^5 deg/sec may be attained. The films 0.05 - 0.2 mm thick were investigated metallographically; an X-ray structural analysis and a quantitative phase analysis were also carried out. Alloys with a maximum concentration C_m of one component were investigated (Fig. 1). On the rapid cooling of Al-Si , Pb-Sn , and Bi-Sn alloys which form no interphases, primary solid solutions are formed whose concentration is lower than C_m . X

Card 1/3

81414

S/020/60/132/06/39/068
B004/B005

Some Peculiarities of the Crystallization of
Eutectic Alloys at a High Cooling Rate

In the systems $\text{Al} - \text{Mn}$, $\text{Al} - \text{Cr}$, $\text{Ni} - \text{C}$, and $\text{Co} - \text{C}$ forming interphases, the primary solid solutions have much higher concentrations than C_M . On crystallization, a second metastable phase (MnAl_4 , $\text{Cr}_2\text{Al}_{11}$, Ni_3C , Co_3C) is formed. On simultaneous crystallization of the stable and metastable phases, two solid solutions are formed - one with C_M , the other one, oversaturated, with the concentration C' which differ roentgenographically from each other. Hence, the authors derive double phase diagrams (for the stable and metastable phases) which are shown in Fig. 2. In the metastable phase, the eutectic point shifts, and temperature decreases further. These results are explained by different $\Delta F/N$, and a change in the free energy of the system per atom of the separating substance in the stable and metastable phases (Fig. 3). There are 3 figures and 13 references: 10 Soviet, 1 British, and 1 German.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University)

PRESENTED: February 17, 1960, by G. V. Kurdyumov, Academician

Card 2/3

Some Peculiarities of the Crystallization of
Eutectic Alloys at a High Cooling Rate

31414
S/020/60/132/06/39/068
B004/B005

SUBMITTED: February 11, 1960

Card 3/3

RAZOSHNEK, I.S. (Dneprostrusk); SAVLI, I.V. (Dneprostrusk)

Structure of cast iron in the liquid state. Sov. Akad...
Otd. tech. nauk. Met. i to. no.1: 24-35 Jan '61. (I.A. A.2)
(Cast iron--Metallography)
(Liquid metals--Hardening)

MIROSHNICHENKO, I.S.

Crystallization of Co - C and Ni - C alloys at high rates of cooling:
Izv. vys. ucheb. zav.; tsvet. met. 4 no.16128-133 '61.
(MRA 14:2)

1. Dnepropetrovskiy gosudarstvennyy universitet, kafedra metallofiziki.
(Niobium alloys—Metallography) (Nickel alloys—Metallography)
(Crystallization)

S/149/61/005/001/R011/R13
AOOE/AOOI

Miroshnichenko, I.S.

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling
izvestiya vysshikh uchebnykh zavedenii, Tsvetnaya metalurgiya,
1961, N^o. 1, pp. 129 - 133

AUTHOR:
TITLE:
PERIODICAL:

TEXT:

During that, crystallization of Co-C and Ni-C alloys, a structure in cobalt or
nickel, and graphite. High-speed cooling does not prevent the separation of a liquid state
graphite (Ref. 1, 2). The presence of new phases was observed which are considered to be cobalt carbide
nickel carbides (Ref. 3). The amounts of Co-C and Ni-C were prepared in the furnace by alloying
order to obtain the formation of Co-C and Ni-C alloys in martensitic structures. To obtain high-speed cooling
components, a metal with graphite is applied in the form of a thin film on two copper plates
cooling rates, the furnace, a method was applied, consisting the quenching of a liquid
cooling, leaving the furnace, in the form of a thin film on a metal with graphite.

Card 1/9

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

S/149/E1/000/001/011/013
A006/A001

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

moving toward each other. The 0.05 - 0.2 mm thin film and the thick cooling plates assure a cooling rate as high as 10^5 degrees/second. To investigate structure formation of the alloys, the author used the X-ray and metallographical methods. The compositions of initial solid solutions were established from the lattice parameter of the solid solution, the chemical analysis of the films and their microstructure. To determine the parameters, reverse X-ray exposure in iron radiation and a nickel standard was used. Changes in the lattice parameter of the alpha-solid solution of carbon in cobalt and nickel depending on the carbon content in the alloy are shown in Figure 1. Radiographs 1 - 6 show the structure of alloys produced at various cooling rates. It was found that in Co-C and Ni-C alloys, crystallizing at a very high cooling rate (about 10^5 degrees/second) great amounts of cobalt and nickel carbides were revealed. It was possible to prevent graphite separation out of thin films of Co-C alloys (with up to 4.4% C) and Ni-C alloys (with up to 3.5% C). Cobalt carbides proved more stable than nickel carbides. A fine dispersed structure with full separation of phases of the initial solid solution and carbide is typical of high-speed cooled Co-C and Ni-C alloys. Initial solid solutions of carbon in cobalt and nickel are strongly oversaturated (Fig. 2).

Card 2/9

S/1-9/E1/000/001/011/0.3
AC06/AC01
Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Maximum solubility attained for carbon was 1.65% in cobalt and 1.85% in nickel. If crystallization of alloys proceeds with the formation of graphite and carbide, then correspondingly, two solid solutions with different carbon concentrations are formed: the one, strongly oversaturated, is in equilibrium with carbide and the other one with graphite (Figure 3). On the basis of experimental results, lines of metastable equilibrium were plotted on the diagram of stable equilibrium of Co-C and Ni-C alloys (Figure 7). If the crystallization of Co-C and Ni-C alloys begins in the bi-phase range, diffusion separation of the phases may take place even at the aforementioned very high cooling rates. The author thanks I.V. Salli for many valuable advices.

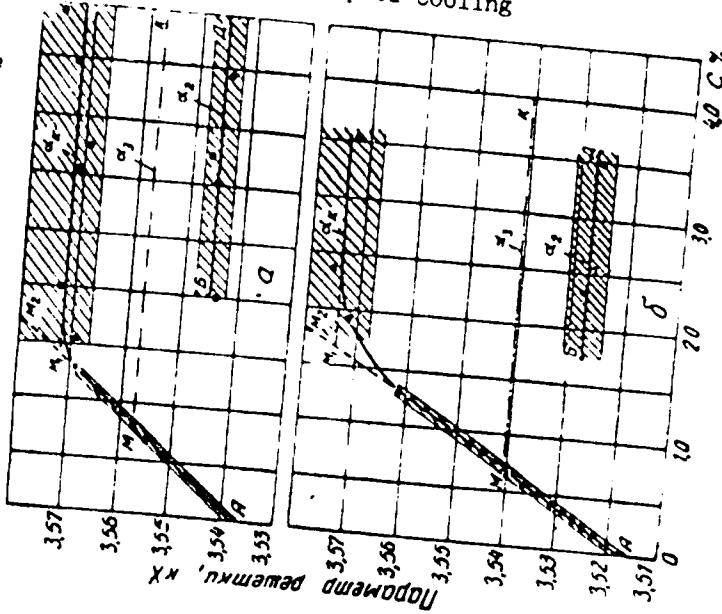
Card 3/9

S/149/61/000/001/011/013
A006/A001

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 1

Dependence of the crystalline lattice parameter of α -solid solution of carbon in cobalt (a) and in nickel (b), on the composition of the alloy.



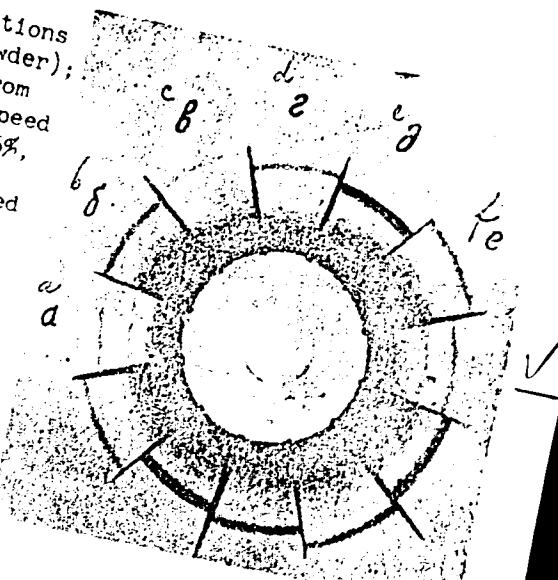
Card 4/9

S/14/51/000/201/011/013
A036/A 91

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 2

Radiographs of strongly oversaturated solutions of cobalt and nickel; a - Co-standard (powder); b - Co-C; 3.0% C, hardening in 10% NaOH from 1,306 - 1,309°C; c - Co-C, 3.0% C. High-speed cooled from the liquid state; d - Ni-C, 2.5%, hardening in 10% NaOH from 1,315 - 1,318°C; e - Ni-standard; f - Ni-C, 2.5% C, high-speed cooled from the liquid state.



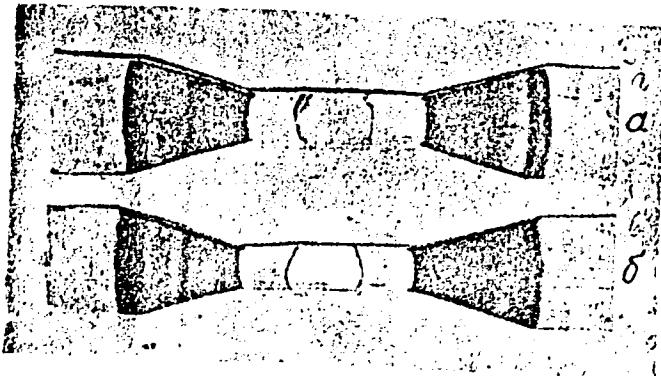
Card 5/9

3/149/61/PS/PS/PS/PS
AC06/AC01

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 3

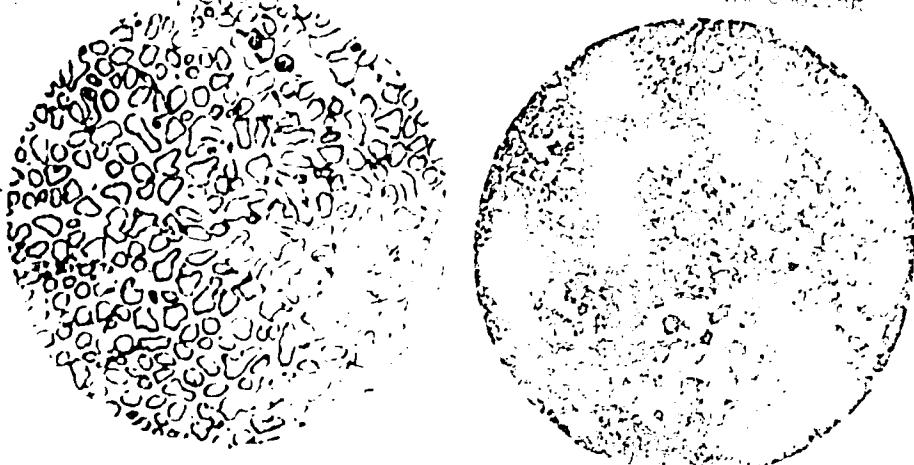
Radiograph of alloys with two solid solutions γ_c and γ_g :
a - Co-C alloy 3.2% C; b -
Ni-C alloy, 2.5% C.



Card 6/9

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 5: Structure of Co-C alloys with 4.4% C, obtained at different cooling rates ($V_1 > V_2$);
a - higher rate,
etching 5% Br, x 1200; b - lower rate, etching
5 g FeCl_3 + 15 ml HCl + 100 ml H_2O ,
x 800.

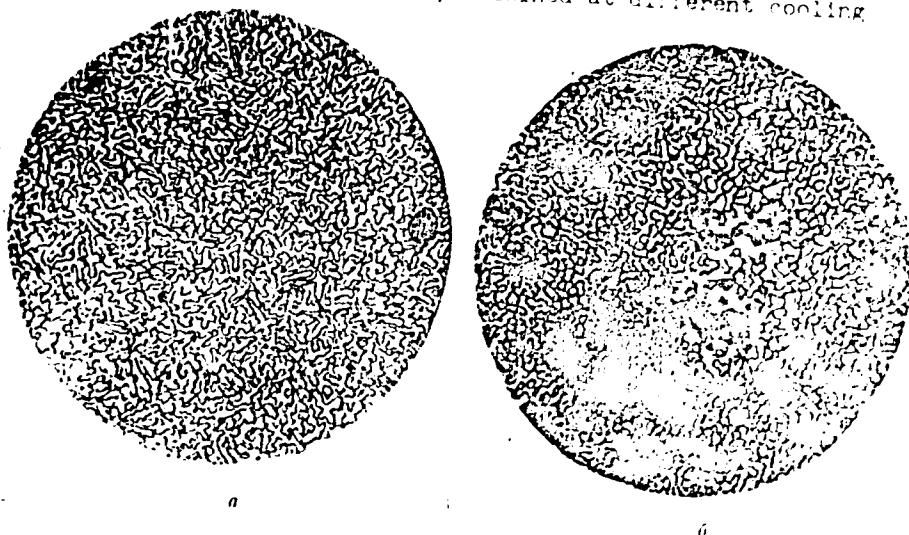


Card 7/9

S/149/6:100/10:01/17
A006/AuCl

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 6: Structure of Ni-C alloys with 3.5% C, obtained at different cooling rates ($V_1 > V_2$):
a - higher rate,
etching 5% Br, x 1500; b - lower rate, etching 5 g FeCl_3 + 15 ml HCl + 100 ml H_2O , x 1000.



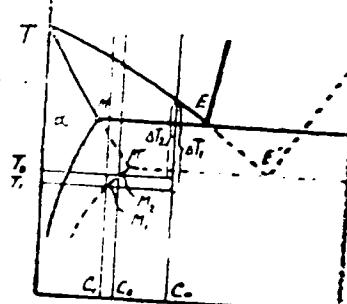
Card 8/9

S/14/E1/C01/001/011/017
ACC6/1/31

Crystallization of Co-C and Ni-C Alloys During High-Speed Cooling

Figure 7

Schematic diagram of metastable (dotted lines) equilibrium of Co-C and Ni-C alloys. The continuous lines show the stable equilibrium.



There are 7 figures and 10 references: 4 Soviet, 3 English, 2 German and 1 French.

ASSOCIATIONS: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University); Kafedra metallofiziki (Department of Physics of Metals)

SUBMITTED: December 22, 1959

Card 9/9

MIROSHNICHENKO, I.S. (Dnepropetrovsk); SALLI, I.V. (Dnepropetrovsk)

Structure of liquid alloys during severe undercooling. Izv.
AN. SSSR. Otd. tekhn. nauk. Met. i topl. no.3:130-131 My-Je
'61. (MIRA 14:7)
(Alloys—Metallography) (Metals at low temperatures)

ACCESSION NR: AR4015547

S/0137/63/000/011/I041/I041

SOURCE: RZh. Metallurgiya, Abs. 111277

AUTHOR: Miroshnichenko, I.S.

TITLE: X-ray studies of the decay of strongly supersaturated solutions of carbon in cobalt and nickel

CITED SOURCE: Nauchn. zap. Dneptropetr. un-t, v. 77, 1962, 45-53

TOPIC TAGS: cobalt impurity, nickel impurity, supersaturated solution, supersaturated metal, supersaturated metal solution, carbon (in) cobalt, carbon (in) nickel

TRANSLATION: The author studied the decay with time of Ni-C alloys with 0.4-2.4% C and Co-C alloys with 0.7-4.6% C for tempering temperatures of 200 and 275°, as well as the time dependence of decay over the 200-650° temperature interval. A cooling rate of up to 10⁵ degrees/sec was attained in 0.05-0.2 mm films obtained upon the introduction of a drop of the molten alloy into the gap between counter-rotating Cu discs. In the Ni-C alloys with up to 2.4% C, there was only a

Card 1/2

ACCESSION NR: AR4015547

supersaturated solid solution of C in Ni in equilibrium with graphite; for 2.4% C the equilibrium was with carbides (metastable state diagram). From the variation of the lattice period it was found that 0.4-1.8% C solutions decay in proportion to both the temperature and the %C. The process is especially intense at 300-400°. The kinetics of Co-C and Ni-C alloys is approximately the same. Bibliography with nine titles. D. Mazo.

DATE ACQ: 09Dec63

SUB CODE: ML

ENCL: 00

Card 2/2

L 2932-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACCESSION NR: AP5023370

UR/0020/65/164/001/0137/0139

AUTHOR: Miroshnichenko, I. S.

44,55

29

TITLE: Influence of the cooling rate during crystallization on the liquation microheterogeneity and solid solution composition of Al-Mg alloys

15 44,55 27 27

SOURCE: AN SSSR. Doklady, v. 164, no. 1, 1965, 137-139 and bottom half of insert facing page 126

TOPIC TAGS: metallurgical research, metallurgy, aluminum alloy, magnesium alloy, solid solution

ABSTRACT: The influence of increasing cooling rate on the liquation heterogeneity and solid solution composition for a number of Al-Mg alloys was investigated. The investigation is an extension of similar work reported on Al-Cu alloys by I. I. Revikov, V. G. Igutsev, and V. S. Zolotarevskiy (Fiz. met. i metalloved., 146, No. 2, 241, 1963). The experimental procedure employed was that of I. V. Salli and L. P. Limina (Zav. lab., No. 1, 120, 1965). The composition of micro-nuclei was determined by x-ray analysis employing the previously established relationship between the lattice parameter a and atom percent of Mg, C

$$a = 0.0044C + 4.041.$$

Card 1/3

L 2932-66

ACCESSION NR: AF5023370

The experimental results are shown graphically (see Fig. 1 on the Enclosure). It is concluded that by suppressing the crystallization of a stable intermediate phase the solid solution region may be considerably extended. Orig. art. has: 3 graphs and 1 equation.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University) 44,5

SUBMITTED: 28Jan65

NO REF Sov: 005.

ENCLs: 01

SUB CODE: MM, SS

OTHER: 002

Card 2/3